



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Am

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,547	11/13/2003	Teruaki Yogo	2486-000001	9176
27572	7590	06/28/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			CABRERA, ZOILA E	
		ART UNIT		PAPER NUMBER
		2125		

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,547	YOGO ET AL.	
	Examiner	Art Unit	
	Zoila E. Cabrera	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 and 16-30 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/13/03; 6/22/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, 16-30 drawn to a system for creating a custom fit fingernail comprising a non-contact measuring system, classified in class 700, subclass 182.
 - II. Claims 13-15, drawn to an artificial fingernail that is milled from a material by a computer numerically controlled device comprising a milled undersurface and a milled top surface, classified in class 700, subclass 159.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the use of non-contact measuring device for the topography of the nail is not required in the steps of milling an undersurface or top surface of a fingernail. The subcombination has separate utility such as milling a fingernail without the use of a scanner or non-contact measuring device.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Dean W. Auburn on 6/22/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12 and 16-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-10, 16-18, 23-24, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by **Tessarolo et al. (US 6,328,949)**.

Regarding claim 1, **Tessarolo** discloses a system for creating a custom fit, artificial fingernail, the system comprising:

- a non-contact measuring system operably measuring a three-dimensional topography of a natural fingernail, the measuring system comprising a light

source and a camera (Col. 1, lines 62-63); and a machining device operably creating the artificial fingernail using the three-dimensional topography of the natural fingernail, the artificial fingernail custom fitting the natural fingernail (Col. 2, lines 28-32; Col. 4, lines 43-44 and lines 58-62; Col. 4, lines 6-8).

As for claims 2-5, **Tessarolo** discloses,

- the light source is a white light, and the non-contact measuring system receives at least one two-dimensional image of the natural fingernail and calculates the three-dimensional topography of the natural fingernail (Col. 3, line 55 - Col. 4, line 13, it is inherent that a scanner includes a white light);
- the light source is a laser, and the non-contact measuring system scans the natural fingernail and calculates the three-dimensional topography of the natural fingernail (Col. 3, lines 53-55);
- the non-contact measuring system converts the three-dimensional topography of the natural fingernail into a machine code for the machining device (Col. 4, lines 58-62);
- a design system for designing the artificial fingernail wherein the design system uses the three-dimensional topography of the natural fingernail in the design of the artificial fingernail (Col. 4, lines 58-62).

As for claims 7-10, **Tessarolo** discloses,

- a measuring and design system operably receiving the three-dimensional topography of the natural fingernail and converting the three-dimensional

topography into a data structure, wherein the data structure comprises the design of the artificial fingernail (Col. 2, lines 4-5 and lines 25-32; Col. 4, lines 5-19);

- A system for creating a customized artificial fingernail with a measured fit to a natural fingernail, the system comprising: a non-contact optical measuring device for measuring a three-dimensional topography of a natural fingernail and providing measurement data for the natural fingernail (Col. 1, lines 62-63; Col. 3, line 55 – Col. 4, line 13); a measuring and design system for receiving the measurement data and designing an artificial fingernail wherein at least a portion of the artificial fingernail will fit the natural fingernail wherein the design of the artificial fingernail will be converted into machine data (Col. 3, line 55 – Col. 4, line 13); and a machining device for receiving the machine codes and machining the artificial fingernail (Col. 4, lines 43-44 and lines 58-62);
- the optical measuring device comprises a white light for taking at least one two-dimensional image of the natural fingernail and calculating the three-dimensional topography of the natural fingernail (Col. 4, lines 6-19);
- the optical measuring device comprises a laser wherein the optical measuring device scans the fingernail and calculates the three-dimensional topography of the natural fingernail (Col. 3, line 53 – Col. 4, line 8).

As for claims 16-18,

- A process for creating a custom fit, artificial fingernail for use with a natural fingernail comprising: measuring a three-dimensional topography of the natural fingernail in a non-contact manner, at least in part through non-contact sensing

(Col. 1, lines 62-63); and forming the artificial fingernail using the three-dimensional topography of the natural fingernail to create a custom fit of the artificial fingernail on the natural fingernail (Col. 2, lines 28-32; Col. 4, lines 43-44 and lines 58-62);

- 17. photographing a natural fingernail grid image with a camera wherein the light source is a white light for projecting a two-dimensional grid onto the natural fingernail (Fig. 7, step 50); converting the two-dimensional grid image into the three-dimensional topography of the natural fingernail (Col. 4, lines 6-36); and converting the three-dimensional topography of the natural fingernail into machine data for the machining device (Col. 4, lines 44-45 and lines 58-62);
- 18. scanning the natural fingernail with a laser for calculating the three-dimensional topography (Col. 3, line 53 to Col. 4, line 8); converting the three-dimensional topography of the natural fingernail into machine data for the machining device (Col. 4, lines 44-45 and lines 58-62).

As for claims 23-24, **Tessarolo** further discloses,

- 23. A computer implemented process for designing custom artificial fingernails for fitting a natural fingernail based on an optical image of the natural fingernail, the process comprising the step of: receiving from an optical imaging device image data defining a surface of a finger comprising a surface of a natural fingernail (Col. 3, lines 64-67); extracting from the image data a portion of image data that defines the surface of the natural fingernail (Col. 4, lines 8-10); selecting a design for the artificial fingernail (Col. 5, lines 29-36); creating a three-

dimensional data structure for the artificial fingernail wherein the data structure comprises the data that defines the surface of the natural fingernail and the design for the artificial fingernail (Col. 4, lines 58-62); and converting the three-dimensional data structure into machine data for cutting the artificial fingernail out of a material (Col. 4, lines 43-45).

- 24. the image data defines a surface of a plurality of fingers comprising a plurality of surfaces of natural fingernails (Col. 3, lines 64-67).

As for claim 29, the same citations applied to claim 23 above apply as well for this claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 11-12, 27-28, and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over **Tessarolo et al. (US 6,328,949)** in view of **Sullivan (US 5, 309,365)**.

Regarding claims 6, 11-12, 27-28, and 30 **Tessarolo** discloses the limitations of claims 1, 8, 23 and 29 above but fails to disclose the machining device is a computer numerical control device for receiving machine data for milling a material into the artificial fingernail and that the machine data are machine codes and the machining device is a computer numerical control device for cutting the artificial fingernail out of

Art Unit: 2125

the material. However, **Sullivan** discloses a system for cutting artificial nail tips and for decorating the same or existing nails wherein a milling tool is used to cut in conformance with control data derived from the sensors (Col. 4, lines 33-36). **Sullivan** further discloses converting means for converting data derived from the sensing means into machine usable data and for shaping the material by cutting it using the machine usable data (Col. 2, lines 20-27). Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **Tessarolo** with the cutting artificial fingernails of **Sullivan** because it would provide an improved system for creating custom crafter artificial fingernails by using an automated system which automatically cuts a blank to size and shape to fit the configuration of the wearer's fingernail (Col. 1, lines 55-60).

4. Claims 19-22, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tessarolo et al. (US 6,328,949)** in view of **Mombourquette (US 6,035,860)**.

Regarding claims 19-22 and 26, **Tessarolo** discloses

- 19. A process for custom designing an artificial fingernail for use with a natural fingernail, the process comprising the steps of: measuring a three-dimensional topography of the natural fingernail with a non-contact measuring system (Col. 4, lines 6-8); calculating a three-dimensional shape of the artificial fingernail from the three-dimensional topography of the natural fingernail and the parameters for the artificial fingernail (Col. 4, lines 10-36); and machining the artificial fingernail

wherein the artificial fingernail custom fits the natural fingernail (Col. 4, lines 43-45 and lines 58-62);

- 20. converting the three-dimensional shape of the artificial fingernail into a machine data for the machining of the artificial fingernail (Col. 4, lines 41-45);
- 21. the machine data are machine codes (Col. 4, lines 41-45);
- 22. displaying the three-dimensional shape of the artificial fingernail before the step of machining the artificial fingernail (Col. 3, lines 64-67 and Col. 4, lines 37-41);
- 26. defining a top surface of the artificial fingernail wherein a portion of the top surface corresponds to the boundary of the surface of the natural fingernail (Figs. 9-11).

However, **Tessarolo** does not disclose some limitations of claims 19 and 26 and the limitations of claim 25. But **Mombourquette** discloses such limitations as follows:

As for claims 19, 25-26,

- selecting parameters for the artificial fingernail, wherein the parameters are selected from the group consisting of thickness, length, and style (Col. 3, lines 18-22; Col. 2, lines 9-11);
- selecting and defining a length of the artificial fingernail; selecting a thickness of the artificial fingernail; and selecting a style of the artificial fingernail (Col. 3, lines 18-22; Col. 2, lines 9-11).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **Tessarolo** with the

system for applying fingernail art of **Mombourquette** because it would provide an improved system wherein a user may preview the selections prior to application of the artwork and thereby choose from a media catalogue which holds a plurality of color and design variances so that a desired art effect can be created for the user (Col. 3, lines 18-22 and lines 37-39).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning communication or earlier communication from the examiner should be directed to Zoila Cabrera, whose telephone number is (571) 272-3738. The examiner can normally be reached on M-F from 8:00 a.m. to 5:30 p.m. EST (every other Friday).

If attempts to reach the examiner by phone fail, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. Additionally, the fax phones for Art Unit 2125 are (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 305-9600.



Zoila Cabrera
Patent Examiner
6/23/05